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BILL NO. S-76-12- 47

5 SPECIAL ORDINANCE NO. S- 26-77

6 AN ORDINANCE approving Change Order  
7 No. 12 in connection with Division  
8 I of Water Pollution Control Plant  
9 Expansion.

10 BE IT ORDAINED BY THE COMMON COUNCIL OF THE CITY OF  
11 FORT WAYNE, INDIANA:

12 SECTION 1. That the Change Order No. 12 to  
13 Hagerman-Shambaugh in connection with Division I of Water Poll-  
14 ution Control Plant Expansion in the amount of \$75,208.00, as  
15 set out in the specifications, is hereby in all things ratified,  
16 confirmed and approved.

17 SECTION 2. This Ordinance shall be in full force  
18 and effect from and after its passage and approval by the Mayor.  
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20   
21 Councilman  
22

23 APPROVED AS TO FORM  
24 AND LEGALITY.  
25   
26 M. J. McCue  
27 CITY ATTORNEY  
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Read the first time in full and on motion by Burns, seconded by  
Hinga, and duly adopted, read the second time by title and referred to the Committee on City Utilities (and the City Plan Commission for recommendation) and Public Hearing to be held after due legal notice, at the Council Chambers, City County Building, Fort Wayne, Indiana, on \_\_\_\_\_, the day of \_\_\_\_\_, 1976, at \_\_\_\_\_ o'clock P.M., E.S.T.

DATE: 12-28-76

Charles W. Westerman  
CITY CLERK

Read the third time in full and on motion by Burns, seconded by Hinga, and duly adopted, placed on its passage.

PASSED (PASSED) by the following vote:

	AYES	NAYS	ABSTAINED	ABSENT	TO-WIT:
TOTAL VOTES	<u>9</u>				
<u>BURNS</u>	<u>/</u>				
<u>HINGA</u>	<u>/</u>				
<u>HUNTER</u>	<u>/</u>				
<u>MOSES</u>	<u>/</u>				
<u>NUCKOLS</u>	<u>/</u>				
<u>SCHMIDT, D.</u>	<u>/</u>				
<u>SCHIMDT, V.</u>	<u>/</u>				
<u>STIER</u>	<u>/</u>				
<u>TALARICO</u>	<u>/</u>				

DATE: 1-25-77

Charles W. Westerman  
CITY CLERK

Passed and adopted by the Common Council of the City of Fort Wayne, Indiana, as (ZONING MAP) (GENERAL) (ANNEXATION) (SPECIAL) (APPROPRIATION) ORDINANCE (RESOLUTION) No. 8-26-77 on the 25th day of Jan, 1976.  
ATTEST: Charles W. Westerman John Nuckles  
(SEAL)

CITY CLERK

PRESIDING OFFICER

Presented by me to the Mayor of the City of Fort Wayne, Indiana, on the 26th day of January, 1976, at the hour of 11:00 o'clock A.M., E.S.T.

Charles W. Westerman  
CITY CLERK

Approved and signed by me this 28th day of January, 1976,  
at the hour of 11:00 o'clock A.M., E.S.T.

Ronald Armstrong  
MAYOR

  
Bill No. S-76-12-47

REPORT OF THE COMMITTEE ON CITY UTILITIES

We, your Committee on City Utilities to whom was referred an Ordinance  
approving Change Order No. 12 in connection with Division I of Water  
Pollution Control Plant Expansion

[A series of approximately 15 blank horizontal lines for signatures.]

have had said Ordinance under consideration and beg leave to report back to the Common  
Council that said Ordinance do PASS.

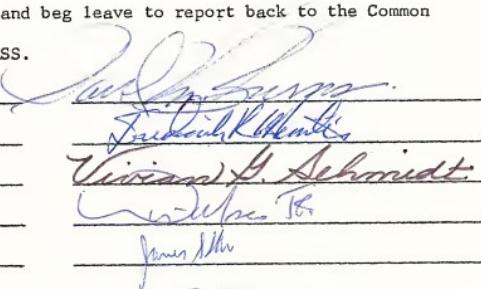
PAUL M. BURNS - CHAIRMAN

FREDRICK R. HUNTER - VICE CHAIRMAN

VIVIAN G. SCHMIDT

WINFIELD C. MOSES, JR.

JAMES S. STIER

  
DATE 1-25-77 CHARLES W. WESTLAKE, CITY CLERK

64-56-11 12/8/76

Job No. 3263.8D

PROJECT Water Quality Control Project

OWNER City of Fort Wayne, Indiana

DIVISION/SECTION I - Water Pollution Control Plant Additions

CHANGE ORDER NO. 12

TO: Hagerman-Shambaugh - Joint Bidders

% Hagerman Construction Corporation

P.O. Box 690 - 403 Strauss Building

Fort Wayne, Indiana 46801

You are hereby authorized to make the following additions and/or deductions to your contract amount.

Previous Contract Amount	Increase	Decrease	Net Change <del>(Excess)</del> (Add)	Revised Contract Amount
TOTAL \$ 21,027,014.10	\$ 124,030.00	\$ 48,822.00	\$ 75,208.00	\$ 21,102,222.10

Description of Change:	Add	Deduct
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Item No. 1

Furnish all labor and materials necessary to convert one of the two proposed dual fuel engine generator sets to a gas spark ignited engine with standard spare parts required for 8,760 hours of operation, plus additional spare parts for one major overhaul for each engine. The following list is a breakdown of material and labor that will be required to make the conversion.

1. Parts required to convert engine to gas spark ignited are as follows:

Cyl Block Group

12 - A-013-358 Cover Plate  
 12 - A-002-967 O-Ring  
 24 - 5/8" - 11x1-1/4" Lg. Hex Head Capscrew  
 24 - 5/8" Lockwasher

Piston & Rod Group

12 - YD-006-462 Piston  
 12 - Y-027-328 Ring Kit



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CHANGE ORDER NO. 12

PROJECT Division I - Water Pollution Control Plant Additions

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Item No. 1 - (Continued)

Add

Deduct

Cyl. Head & Rocker Shaft Group

- 12 - Y-021-224 Cyl. Head
- 12 - Y-020-860 Rocker Shaft
- 12 - A-020-843 Cap - Spark Plug
- 12 - A-113-745- O-Ring
- 24 - 3/8" - 16 x 1-1/4" Capscrew
- 24 - 3/8" Lockwasher

Governor Drive & Linkage Group

- 1 - B-014-196 Shaft - Air Control
- 1 - B-016-517 Shaft - Gas Control
- 1 - B-015-681 Gov. Lever
- 1 - B-022-220 Adj. Rod
- 1 - A-014-099 Spring Retainer
- 1 - A-019-583 Spring Retainer
- 1 - B-020-173 Lever
- 1 - C-020-175 Mtg. Bracket
- 3 - 3/8" - 16 x 1" Capscrew
- 3 - 3/8" Lockwasher
- 1 - A-012-638 Air Stop Cyl.
- 1 - 3/4" - 16 Full Nut
- 1 - A-012-419 Control Valve
- 2 - 7/16" - 20 Hex Jam Nut
- 1 - A-012-678 Nut
- 1 - A-012-679 Adj. Rod
- 1 - A-006-729 Adj. Rod
- 2 - A-006-731 Spacer
- 1 - A-006-732 Pin

Camshaft Group

- 1 - YD-018-422 Camshaft
- 1 - YD-018-423 Camshaft

Jacket Water Supply Group

- 12 - YC-020-985 Pipe Assembly

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CHANGE ORDER NO. 12

PROJECT Division I - Water Pollution Control Plant Additions

Item No. 1 - (Continued)

Add

Deduct

Cyl. Block & Cyl. Head Cover Group

- 6 - E-022-291 Cover
- 2 - YC-006-945 Manifold
- 12 - A-003-608 Gasket
- 24 - 3/8" - 16 x 3/4" Capscrew
- 24 - 3/8" Lockwasher
- 12 - A-016-860 Grommet
- 12 - D-013-763 Support

Magneto & Mag. Drive Group

- 1 - Set Parts per marked  
Group 863-015

Gas Supply Group

- 1 - A-019-802 Solenoid Valve

Ign. Transmission, Spark Plugs & Wiring

- 1 - Set Parts per Group 863-158

Total Cost For New Parts to Convert Engine	\$ 61,522
Labor and special equipment required to convert engine	23,553
Shipping charge for engine and parts	7,388

2. Parts that are to be removed from engine  
and credit given are as follows:

Cylinder Block Group 860-229

- 12 - A-004-699 Bushing

Piston & Connection Rod Group 860-331

- 12 - YD-014-184 Piston
- 12 - Y-021-739 Ring Kit (leave on Pistons)

Cyl. Head & Rocker Shaft Group 860-424

- 12 - Y-018-519 Cyl. Head
- 12 - Y-016-153 Rocker Shaft
- 12 - YA-016-358 Compression Relief Valve
- 12 - YA-017-533 Nozzle Drain Line

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CHANGE ORDER NO. 12

PROJECT Division I - Water Pollution Control Plant Additions

Item No. 1 - (Continued)

Add

Deduct

Push Rod & Cam Follower Group 860-512

- 12 - YA-019-979 Fuel Valve Guide & Roller
- 12 - YA-004-698 Fuel Pump Push Rod

Throttle Control Shaft & Linkage Group 860-703

- 12 - 8-003-781 Lever

Governor Drive & Linkage Group 860-870

- 1 - B-014-945 Bracket
- 1 - C-014-065 Governor Lever
- 2 - A-002-764 Lever
- 1 - B-023-543 Lever
- 1 - B-006-714 Lever
- 1 - Y-023-581 Hydraulic Cylinder Assy.
- 2 - A-019-802 Solenoid Valve
- 1 - Y-016-425 Hydraulic Cylinder
- 2 - A-019-816 Solenoid Valve

Fuel Injection Group 861-111

- 12 - C-014-060 Fuel Pump
- 12 - A-014-643 Nozzle Holder
- 12 - A-024-518 Nozzle Tip
- 12 - YB-002-958 Fuel Line Assy.
- 12 - A-016-278 Elbow-Fuel Line
- 12 - B-015-461 Fuel Line Assy.

Fuel Oil Supply Group 861-227

- 1 - A-028-313 Fuel Oil Strainer
- 1 - A-108-865 Vertical Check Valve
- 1 - A-103-775 Fuel Oil Hand Priming Pump
- 1 - A-118-455 Fuel Oil Filters
- 2 - YB-006-903 Fuel Oil Manifold
- 1 - A-020-645 Relief Valve
- 2 - YC-006-945 Fuel Oil Drain Manifold
- 1 - Y-005-655 Fuel Oil Drip Pump
- 2 - YB-012-137 Bleeder Header Assy.

Jacket Water Supply Group 864-323

- 12 - YB-021-915 Pipe Assy - Cylinder Head  
Water Outlet

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CHANGE ORDER NO. 12

PROJECT Division I - Water Pollution Control Plant Additions

Item No. 1 - (Continued)

Add

Deduct

Cylinder Block & Cylinder Head Cover -  
Group 862-249

- 6 - E-022-290 Cover  
12 - C-010-068 Cover

Fuel Oil Service Pump Group 862-721

- 1 - D-021-868 Adapter Plate-L. Bank  
1 - D-028-053 Adapter Plate-R. Bank  
1 - Y-021-977 Fuel Service Pump Drive Housing  
1 - U-002-998 Tachometer Drive to Adapter Plate

Electric Tachometer Group 863-300

- 1 - A-004-234 Tachometer Adapter  
1 - A-104-615 Magneto Generator

Bimba Air Stop Cylinder Group 863-884

- 1 - A-001-270 Solenoid Valve  
1 - A-016-201 Air Stop Cylinder  
1 - A-016-191 Spring

Total Credit Given For Parts Removed

\$ 48,822

5. Additional Spare Parts

2 - Y-018-519 Head Assy.	\$ 5,511.72
2 - Y-021-224 Head Assy.	5,489.18
2 - K-020-073 Complete Eng. Gasket Kit	2,024.69
2 - B-002-389 Exhaust Valve	82.00
2 - B-023-971 Exhaust Valve	177.68
2 - B-008-324 Inlet Valve	204.47
2 - B-023-972 Inlet Valve	222.52
2 - A-003-741 Valve Spring Outer	13.69
2 - 4A-1393-A Valve Spring Outer	18.52
2 - A-003-742 Valve Spring Inner	10.00
2 - 4A-1392-A Valve Spring Inner	12.30
1 - Y-024-420 Cylinder Liner	460.69

PAGE NO. 6CHANGE ORDER NO. 12PROJECT Division I - Water Pollution Control Plant Additions

<u>Item No. 1 - (Continued)</u>	<u>Add</u>	<u>Deduct</u>
<b>5. Additional Spare Parts - (Continued)</b>		
2 - B-005-241 Thrust Washer Main Bearing	55.78	
6 - C-019-910 Main Bearing Upper	\$ 638.60	
6 - C-019-911 Main Bearing Lower	658.60	
1 - C-014-060 Fuel Pump	428.55	
12 - B-023-641 Crank Pin Bearing Upper	523.71	
12 - B-023-642 Crank Pin Bearing Lower	596.85	
12 - B-025-874 Piston Pin Bushing	57.96	
12 - Y-021-739 Ring Sets	1,290.50	
12 - Y-027-328 Ring Sets	1,063.29	
1 - Y-024-600 Magneto	903.33	
12 - B-022-088 Spark Plugs	35.88	
12 - A-024-518 Fuel Tips	666.54	
1 - A-022-183 Turbo	10,420.15	
 Totals	\$124,030.00	\$ 48,822
Net Change Add	\$ 75,208.00	

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CHANGE ORDER NO. 12  
PROJECT \_\_\_\_\_

Note: This change does not affect the completion date.

RECOMMENDED:

HENRY B. STEEG & ASSOCIATES, A DIVISION  
OF HOWARD-NEEDLES TAMMEN & BERGENDOFF

By Ray H. Kocher  
Title Project Engineer Date 11/29/76

ACCEPTED:

HAGERMAN-SHAMBAUGH

ACCEPTED FOR: HAGERMAN CONSTRUCTION CORP.  
CONTRACTOR

By William F. Lacy  
Title Will Lacy Date 11-29-76

ACCEPTED FOR: SHAMBAUGH & SON, INC.

CONTRACTOR

By John Z. Bush  
Title John Z. Bush Date 11-30-76

APPROVED:

CITY OF FORT WAYNE, INDIANA  
OWNER

By Henry P. Wehrenberg  
Henry P. Wehrenberg, Chairman  
Steve L. Larson

Ethel H. LaMar, Member  
May G. Scott  
Max Scott, Member  
Title BOARD OF PUBLIC WORKS

Date: 12/8/76

Item No. 1

Change Order No. 12

Board Order No. \_\_\_\_\_

REQUEST AND JUSTIFICATION FOR CHANGE

1. Necessity for change: The necessity for this change is to provide high combustion efficiency for operation using a wide range of sewage gas with greater power output and fuel economy by converting one of the two engine generator sets to a gas, spark ignited unit. The other engine generator set with a dual fuel engine will be used during periods when digester gas production is down and when supplemental fuel is needed for duty and emergency operation. The capability of running the spark ignited gas fired engine when gas supply is sufficient will save approximately 100 gallons of No. 2 fuel oil per day. The additional spare parts that are listed in this change order will provide the City with a good inventory of preventive maintenance parts for more reliable full duty system and less shut down time for repair.

2. Will proposed change alter size of the project? Yes X No \_\_\_\_\_

If yes, explain

There will be a cost for labor and material needed to do the conversion.

3. Affect on operation and maintenance cost of this project:

As described above.

\_\_\_\_\_

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\_\_\_\_\_  
Engineer

Change Order No. 12

Board Order No.

#### REQUEST AND JUSTIFICATION FOR CHANGE

- Necessity for change: The necessity for converting one of the two engine generator sets to a gas, spark ignited unit, is to provide high combustion efficiency of operation while using a wide BTU range of sewage gas. The other engine generator set with a dual fuel engine will be used during periods when digester gas production is down and when supplemental fuel is needed for duty and emergency operation. The capability of running the spark ignited gas fired engine when gas supply is sufficient will save approximately 100 gallons of No. 2 fuel oil per day. The additional spare parts that are listed in this change order will provide the City with a good inventory of preventive maintenance parts for more reliable full duty system and less shut down time for repair.
  - Will proposed change alter size of the project? Yes  No \_\_\_\_\_  
If yes, explain  
There will be a cost for labor and material needed to do the conversion.
  - Affect on operation and maintenance cost of this project:  
As described above.

### Engineer

# City Clerk Memorandum

CHARLES W. WESTERMAN, Clerk



To \_\_\_\_\_ Mayor Robert E. Armstrong \_\_\_\_\_ Date 1-12-77  
From \_\_\_\_\_ Charles W. Westerman - City Clerk  
Subject \_\_\_\_\_ Appearance before Common Council - January 18, 1977

COPIES TO:

BILL NO. S-76-12-47

AN ORDINANCE approving Change Order  
No. 12 in connection with Division  
I of Water Pollution Control Plant  
Expansion

Pursuant to the request of the Standing Committee Chairman of  
City Utilities of the Common Council, the presence of Joseph F.  
Morreale - Superintendent of City Utilities is respectfully  
requested on January 18, 1977, at 7:30 P.M., Room 128, Common  
Council Conference Room.

A more detailed explanation is requested by council regarding  
Change Order No. 12 and fuel economy by using sewage gas.

Your cooperation will be greatly appreciated.

TITLE OF ORDINANCE SPECIAL ORDINANCE Change Order #12 on Division I of WPC Expansion  
Project  
DEPARTMENT REQUESTING ORDINANCE BOARD OF PUBLIC WORKS

*8-78-12-47*

SYNOPSIS OF ORDINANCE Change Order #12 of Hagerman-Shambaugh in amount of \$75,208.00 provides for labor and materials needed to convert one of the two proposed dual fuel engine generator sets to a gas spark ignited engine. This will provide for fuel economy by using a wide range of sewage gas. (SEE ATTACHED COPY FOR DETAILED EXPLANATION)

EFFECT OF PASSAGE Increase contract cost in amount of \$75,208.00 thereby providing future fuel economy by being able to use sewage gas when available in sufficient amounts.

EFFECT OF NON-PASSAGE Higher fuel costs amounting to approximately 100 gallons of fuel oil per day.

MONEY INVOLVED (DIRECT COSTS, EXPENDITURES, SAVINGS) Increase contract price on Federally Funded Project in amount of \$75,208.00

ASSIGNED TO COMMITTEE City Utilities